

COOPERATIVE CONTROL REDUCES RAT DAMAGE TO HAWAIIAN CROPS

An improved poison bait to control rats in Hawaiian sugar cane, pineapple, coffee, and macadamia nut areas is being furnished growers by the U.S. Department of Agriculture from its bait-mixing station at Honolulu. Control was started in Hawaii last year by the Bureau of Biological Survey in cooperation with the Extension Service, Hawaii Agricultural Experiment Station, and the University of Hawaii. Losses have been lowered.

Casings such as are used in making sausages are filled with mixtures of ground fish, salt pork, bacon rind, grain, and toxic materials. These are cut into short lengths and sealed in tin cans for shipment.

In the coffee groves rats mip the tree branches and reduce the yield. This damage, the Biological Survey found, can be reduced by poison bait in the lava-rock fences and walls that harbor rats, by clean groves, and by trapping.

Rats also are very fond of macadamia nuts and invade the orchards when the nuts fall and are ready for harvest. Poison bait along the edges of the orchards and near the trees, followed by trapping, checks the rats.

Most of the rat damage in the sugar cane fields in the islands of Hawaii, Maui, Kauai, and Oahu, is caused by the Norway, or common brown, rat. In the coffee groves in the Kona district in Hawaii and the black rat does the damage, and in the macadamia nut groves in the Kona district and on Oahu the brown, black, and small native rats are active.

Control in the sugarcane fields, says D. D. Green of the Biological Survey, who recently inspected the islands, is difficult as the rats are fond of cane, and control is hindered by dense foliage. Last year, for example, the damage caused by rats in a 17,000-acre cane plantation in Kauai was estimated at \$147,000. Control measures applied immediately after harvest before the rats migrate, kills many of them. Practically all the cane fields are in danger of reinfestation, as nearby canyons covered with dense brush are excellent rat harbors.

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